PORTER'S WILLOW STREET PROPERTY
WORKPLAN

Site Location

Porter's Willow Street property (OK 04707) is located in Enid, Oklahoma which is in Garfield county. The area of concern is bounded by N. 30th street, N. 42nd street, Willow Street, and the Atchison, Topeka, and Santa Fe railroad track. The site can also be described by being at 36° 25' 00" N. latitude and 97° 49' 32" W. longitude.

The property actually owned by Paul Porter is described by ¼NW of ¼NE of Sec 3, T22N, R6W. See the maps in Appendix B.

Site History

Within the boundaries of the site are multiple problem areas. These areas include drinking water wells contaminated with carbon tetrachloride and chloroform, a buried frac pit, a frac tank storage area, a concrete slab with square holes covering a pit full of a liquid sludge (this area is called the slab/pit), and discharges from "scavenger" hydrocarbon recovery wells.

There have been a number of businesses and activities in this area which could have helped to create the present situation. The past industries and activities at this site have included an oil refinery, various pesticide formulation companies, and oilfield service companies.

The most prominent industry in the area is the Champlin Refinery which is now undergoing closure. This refinery has operated for many years and has significantly impacted the groundwater quality in the immediate vicinty.

There have also been a variety of pesticide formulating operators located at the slab/pit to the east of Champlin and immediately to the south of W. B. Johnston Grain Elevator. Some of the products formulated included DDT, Chlordane, Aldrin, Malathion, Parathion, Eldrin, Heptachlor. See Appendix C for a history of the companies which have occupied the slab/pit area.

There have also been in the past, and are now, oilfield service companies in a small industrial park on the northeast portion of the property. (b) (6) owns Kem Weed, a pesticide formulating company, which is located in the industrial park. The incident which focused regulatory attention on this area was a complaint by (b) (6) (b) (6) that his shallow drinking water well had been contaminated. He alledged that this occurred because of the dumping of wastes into an old "frac pit" by Ray Jones Truck Service. The Corporation Commission ordered the owner of the pit, Paul Porter, to cover it in 1981.

The (b) (6) property which is directly across the road to the west of the slab/pit, was investigated by Ecology and Environment in 1982. This property has been associated with the companies which owned/operated the slab/pit in the past. The (b) (b) (6) property was investigated because of a Superfund notification by Gulf Oil Chemical Division, who indicated that barrels of parathion had been buried on the property. Ecology and Environment found no corroborating evidence of burial and determined that parathion was not very persistent in the soil.

There are several current industries and activities which may be contributing to the problems of the area. Some possible sources of the carbon tetrachloride and chloroform showing up in the ground water are the grain elevators which use chemicals to treat seed wheat. Champlin refinery, which has been in operation for years, is being dismantled and hydrocarbon recovery operations are underway. There are also private "scavengers" around the perimeter of Champlin which are attempting to recover hydrocarbons flowing off of the refinery property. These "scavengers" discharge water, which smells strongly of organics into Skeleton Creek. There is also an old barn on the property which is full of empty herbicide containers.

Two residences, (b) (6) family, have been informed that their drinking water is contaminated. The (b) (6) have been advised against drinking their water. (b) (6) was informed that drinking his water would increase his risk of cancer.

Past Investigations

There has been sampling activity by both Ecology and Environment and the Health Department. Ecology and Environment sampled in March of 1983 and April of 1984. Their sample results indicated the presence of such substances as pentachlorophenal, mercury, dioxin, and two tentatively identified compounds: 1-chloro-decane and 1-chloro-tetraderane. The Health Department sampled in April of 1984 also. The Health Department samples consisted mostly of well water samples and a sample from the slab/pit. These samples indicated the presence of mercury, tetrachloroethylene, carbon tetrachloride, chloroform, phenol, arsenic, and 1,2 dichlorethane in the ground water. The slab/pit sample showed selenium, 1 toluene, 1,1,1-trichloro-ethane, 1,1 dichloroethane. Subsequent sampling by the Health Department did not confirm the presence of mercury but did confirm the carbon tetrachloride, chloroform, and 1,2-dichloroethane. Ecology and Environment took a confirming sample for dioxin but the sample results are not yet known. Penta-chlorophenal has been found in (b) (6) old well and in his monitor well number one.

Tentative Conclusions

(1) There has been sufficient evidence of ground water contamination to cause the Health Department to send letters of warning to two residences informing the occupants of contamination of their drinking water. There is definite evidence of contamination of these two drinking water wells with carbon tetrachloride, chloroform, and 1,2 dichoroethane. One route of migration of these contaminants has been established which agrees with information in the Champlin ground water study. (2) Dioxin has been found in two soil samples in the frac tank storage area. A third dioxin sample was taken to confirm the earlier two but the results are not yet known. (3) There is also evidence of hydrocarbons migrating through the site in ground water from Champlin towards Skeleton Creek. This evidence comes from Champlin's own ground water study. See Appendix A for more information on this study. (4) There is also evidence of contamination of (b) (6) old well with penta chloraphenol.

Objectives of the SIF

The objectives of the Site Inspection Follow-up are to: (1) Define the problem areas and how they relate to each other; (2) Identify and confirm sources for the

carbon tetrachloride and chloroform; (3) Determine the potential for hazard presented by the slab/pit; (4) Determine the potential for hazard presented by the buried frac pit; (5) Evaluate the environmental health implications of the problem areas; (6) To score the site using the Hazard Ranking System.

OKLAHOMA STATE DEPARTMENT OF HEALTH
PROPOSED SAMPLING PLAN
FOR
PORTER'S WILLOW STREET PROPERTY
OK 04707

The information available on this site indicates that there are multiple problem areas in close proximity to each other. We feel that these separate areas should be approached in a coordinated manner.

The primary public health problems are carbon tetrachloride, chloroform, and 1,2-dichloroethane found in the ground water in the area of W.B. Johnston Grain elevator, the (b) (6) house, and the (b) (6) residence. Data suggests that W.B. Johnston Grain elevator may be a possible source for this contamination. The W. B. Johnston Grain elevator, the (b) (6), and the (b) (6) residence wells should be resampled to check the levels and flow of contaminants.

Carbon tetrachloride has also been found in the Enid State School ballfield well. The three grain elevators west of the Champlin refinery are possible sources for the carbon tetrachloride at the State School, but this hypothesis needs to be investigated. We intend to survey the area from the three grain elevators west of Champlin to the Enid State School to determine if there are any wells suitable for sampling the ground water. If such wells exist, we will attempt to establish whether a flow of contaminants from the elevators to the State School is indeed occurring.

The second problem area is the slab/pit, filled with unknown liquids, and possibly associated Jim Peckham property. This area poses an unknown hazard. The slab/pit is a concrete slab with large holes, over a pit full of unknown liquids, which have been dumped there in the past. The only samples taken so far have been off the surface. We feel that a more representative sample is needed. We will also sample an existing "scavenger" hydrocarbon well located next to the slab pit. We feel that this well is creating a hydrological gradient, possibly causing substances to migrate from the slab/pit.

The third problem is the old Frac pit and the Frac tank storage area. The Frac pit is alleged to have contaminated (b) (6) old well. Dioxin has been found in a previous sample of the Frac tank area and we are awaiting results of another sample to confirm the dioxin contamination. Since the only samples from the Frac pit have been surface samples of the cover material, we plan to dig or drill into the fill material and sample it.

The discharges and drainage channels from some of the "scavenger" hydrocarbon recovery wells should be sampled. There have been complaints in the past about "solvent odors" from the discharges. These discharges ultimately drain into Skeleton Creek.

We also intend to sample Skeleton Creek above and below Porter's Willow Street Property to see if the contaminants are indeed entering the surface water.

PORTER'S WILLOW STREET PROPERTY

SAMPLE TYPE	LOCATION	# OF SAMPLES	ITEMS OF CONCERN
Ground water	W.B. Johnson Grain Elevator	1	Organics/Metals
Ground water	(b) (6) [redacted]	1	Organics/Metals
Ground water	(b) (6) [redacted]	1	Organics/Metals
Ground water	3 Grain Elevators West of Champlin	1 each = 3	Organics/Metals
Ground water	Enid State School Ballfield Well	1 before pumping 1 after pumping	Organics/Metals
Ground water	Wells between Grain elevators and the Enid State School	3	Organics/Metals
Liquid/Sludge	Slab/pit	3	Pesticides Organics/Metals
Soil	Frac Pit	3	Organics/Metals
Soil	Frac Tank Area	3	Organics/Metals
Surface water	Skeleton Creek	1 above site	Organics/Metals
Surface water	Skeleton Creek	1 below site	Organics/Metals
Surface water	"Scavenger" Well adjacent to slab/pit	1	Pesticides Organics/Metals
Ground water	"Scavenger" Well adjacent to slab/pit	1	Pesticides Organics/Metals
Soil	Discharges from "scavenger" wells along railroad tracks	2	Organics/Metals
Surface water/ Soil	Discharges from "scavenger" wells to be determined	3	Organics/Metals
Ground water	(b) (6) [redacted] old water well and his monitor well number one	2	Organics

FURTHER SAMPLING NEEDED TO DETERMINE EXTENT OF DIOXIN CONTAMINATION

FIT SAMPLE STATIONS

No.	Locations	Type	Date Sampled
1	Frac Tank Storage Area	Grab Soil	3/14/83
		Composite Soil	4/11/84
2	Frac Pit Area	Surface Grab Soil	3/14/83
		Subsurface Grab Soil	3/15/83
3	Mud Pit Area	Surface Grab Soil	3/14/83
		Grab Soil	3/15/83
		Composite Soil	4/10/84
4	Runoff Leading to Duck Pond	Grab Soil	3/14/83
5	Porter's North Monitoring Well	Water	3/15/83
6	Porter's South Monitoring Well	Water	3/15/83
7	(b) (6) Old Drinking Water Well	Water	3/15/83
8	Dresser-Titan Drinking Water Well	Water	3/15/83
(9)	W. B. Johnston Old Water Well	Water	3/15/83
(10)	(b) (6) #1 Monitoring Well	Water	3/15/83
11	South Quarry Pond, North Center Bank	Water	4/10/84
	" "	Soil	4/10/84
12	Enid State School Well #10	Water	4/11/84
13	Kem Weed (R.Reid) North Monitoring Well	Composite Water	4/11/84
14	100' East of Station #17	Grab Soil	4/11/84
15	Water Well 1000' N. of 30th & Willow (by D&G Drilling) (1000' original est.)	Water	4/10/84
16	Kem Weed (R.Reid) New Water Well	Water	4/10/84
(17)	High Hazard Sample on Concrete Pad w/Sump	Sludge	4/11/84
(18)	140' S. & 150' W. of Kem Weed's Well	Dioxin Soil	4/11/84

NUMBERS CIRCLED ARE TO BE TREATED AS HIGH HAZARD SAMPLES AND ARE TO BE SAMPLED FOR DIOXIN.

SAMPLE THOSE NUMBERS THAT ARE CIRCLED, ONLY.

APPENDIX A

Porter's Willow Street Property

Ground water survey for
Champlin's Enid Refinery
Enid, Oklahoma
Prepared by Woodward-Clyde Consultants
August, 1984.

This study concludes that the ground water flows off the refinery property to the northeast and to the southeast toward Skeleton Creek. The ground water flows at a rate of 0.05 to 1.5 ft per day. According to the Champlin study Skeleton Creek acts as a hydrologic barrier to ground water movement.

This study also says that there are hydrocarbons floating on top of the ground water. These hydrocarbons are migrating off-site through the Porter's Willow Street Property.

APPENDIX C

Porter's Willow Street Property

The slab/pit property has been owned by several companies over the past thirty years. The majority of these companies dealt with pesticide formulation.

¼NE of Sec. 4, T22N, R6W

11/16/50	Champlin Refinery sold part of the property to Leon Cook.
11/9/53	Champlin Refinery leased a warehouse to Leon Cook and S.W. Chemical Supply Inc.
3/31/54	S.W. Chemical Supply sold the property to Vita Life Corporation.
10/7/63	Vita Life Corporation sold the property back to S.W. Chemical Supply. Then S.W. Chemical Supply sold the property to Spencer Chemical Company.
5/18/64	Spencer Chemical Company either sold to or merged with Gulf Oil Chemical Co.
5/11/73	Gulf Oil Chemical Co. sold the property to Western Bridge and Steel Co.
10/30/79	Western Bridge and Steel sold part of the property to Jacqueline Cummings.
4/7/83	Western Bridge and Steel sold part of the property to Freeman Scaffolding.

~~Larry R.~~ ~~LARRY W~~ ~~FYI~~ ~~Thanks~~ - Porter Willow.

RECORD OF COMMUNICATION

☒ PHONE CALL ☐ DISCUSSION ☐ FIELD TRIP ☐ CONFERENCE

☐ OTHER (SPECIFY) OK. 4707

(Record of item checked above)

TO:	FROM:	DATE
Keith Bradley 6ES-SH	Paula Ausserer Sample Management Office	4/27/84
		TIME 2:30

SUBJECT

Porter's Willow St Property

SUMMARY OF COMMUNICATION

Paula gave me verbal info on Hg levels in the water samples being analyzed by U.S. Testing:

Sample #	Hg (ppb)	Location
MF0717	0.4	Quarry Pond, south side
0719	< 0.2	chemweed water well
0744	< 0.2	water well 1000' N. of 30th + Willow by D+G Drilling
0746	0.7	chemweed monitoring well
0747	0.5	state school water well
0749	< 0.2	blank

U.S. Testing will provide us with verbal data for inorganic analysis of water samples next Tues. Paula is trying to get verbal data ASAP from Mead Compuchem on the organic analysis of the same samples.

CONCLUSIONS, ACTION TAKEN OR REQUIRED

INFORMATION COPIES

TO: Rexroat, Peters, Striebing

EPA Form 1300-6 (7-72) REPLACES EPA HQ FORM 5300-3 WHICH MAY BE USED UNTIL SUPPLY IS EXHAUSTED.

OK 4707 Porters Willow St. Sam - FYI

RECORD OF COMMUNICATION

☐ PHONE CALL ☐ DISCUS ☐ FIELD TRIP ☐ CONFERENCE
☐ OTHER (SPECIFY)
(Record of item checked above)

TO: Larry Wright

FROM Record

DATE 5-4-84

TIME

SUBJECT Porters Willow Street Property - End Oklahoma

SUMMARY OF COMMUNICATION

- Talked to Ken Burns yesterday (5-3-84) He said that:
  1. Report of High Hg in the private wells was taken.
  2. They did find elevated:
     a) CCl_4 b) CCl_3 c.) Ethylene Dichloride in one well opposite from the nearby grain elevator
  3. They plan to warn the home-owners today
  4. May notify media today of the situation

- I contacted ~~EPA~~ Keith and FIT will ~~sample~~ the well of concern (FIT did not sample this well in the earlier inspection)

- the well of concern is across the road from a grain elevator. CCl_4 has been used as a grain fumigant in the past.

CONCLUSIONS, ACTION TAKEN OR REQUIRED

- After all data are back from the previous sampling episode and the current episode, we will need to evaluate and if well contamination exists try to locate source.

INFORMATION COPIES TO:

UNITED S ES ENVIRONMENTAL PROTECTIO .GENCY

DATE 5-3-84

SUBJECT FIT Task Request

FROM LARRY P. ROCKOFF

TO Dave Peters, 6ES-SH

Please task FIT to complete the following work:
(preliminary assessment, reconnaissance inspection, enforcement support, etc.)

SITE #	SITE NAME	TYPE OF WORK
OK 4707	Porters Willow Street	Sampling.

Details of Assignment (if necessary):
Sample Hodges Residence well NorthWest of site.
Exact location to be obtained from ODH (Ken Burns)
State sampled well and partial result to date indicate high levels of Chloroform, Carbon Tetrachloride, and 1-2 Dichloroethane

CONCUR: [signature] Gardner

[signature] for Wright
Section Chief

cc: Gardner, Files

EPA Form 1320-6 (Rev. 3-76)

06 4207 – Porters Willow

RECORD OF COMMUNICATION

☒ PHONE CALL ☐ DISCUSSION ☐ FIELD TRIP ☐ CONFERENCE
☐ OTHER (SPECIFY)
(Record of item checked above)

TO: REXROAT 6AWSE

FROM: Fenton Rood OSDH

DATE: 4-27-84

TIME: 8:35 Am

SUBJECT: Porter's Willow Street Property Enid Oklahoma

SUMMARY OF COMMUNICATION

- FIT did inspection of the site approximately 2 weeks ago.
- Accompanied by OSDH — OSDH also sampled.
- Fenton called to inform me of partial results of OSDH sampling. Private wells in area of site show elevated Hg (50 ppb, 5.9 ppb) and CCl_4. Still don't have organics report.
- State does not know for sure where contamination originated. One theory for the CCl_4 is that a state school for the handicapped that may have operated a dry cleaning plant.
- State plans to warn persons in area that are on groundwater, and determine method of providing alternate water supply where necessary.

CONCLUSIONS, ACTION TAKEN OR REQUIRED

- I contacted Keith Bradley of ESD. They will push for a quick turnaround on FIT samples. Also Keith and I will sit down with Debra Vaughn of EdE to discuss sampling locations; did state sample same locations as FIT?; did FIT split samples; etc.
- Dave Peters indicated that Russ Rhodes will be notified of the situation and will probably notify Dick because

(Continued)

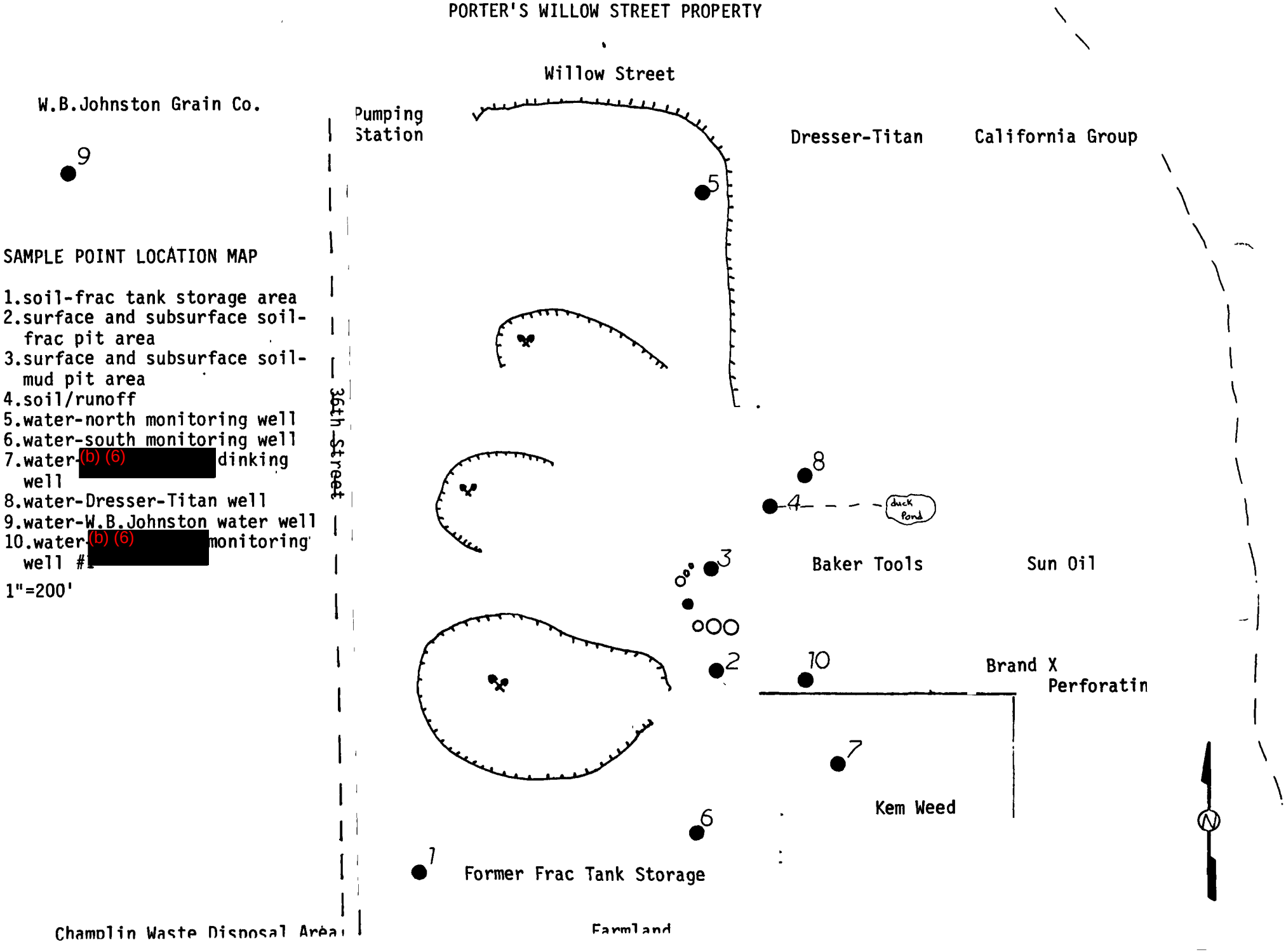
INFORMATION COPIES TO: Wright, Nott, Davis

EPA Form 1320-6 (7-77) REPLACES EPA NO. 1320-6 (7-76) WHICH MAY BE USED UNTIL SUPPLY IS EXHAUSTED.

of the State Notifying Citizens of the Contamin

— I will stay in close contact w/ Keith to ensure that we get sample results as soon as possible, a also investigate the possibility of more sampling.

PORTER'S WILLOW STREET PROPERTY

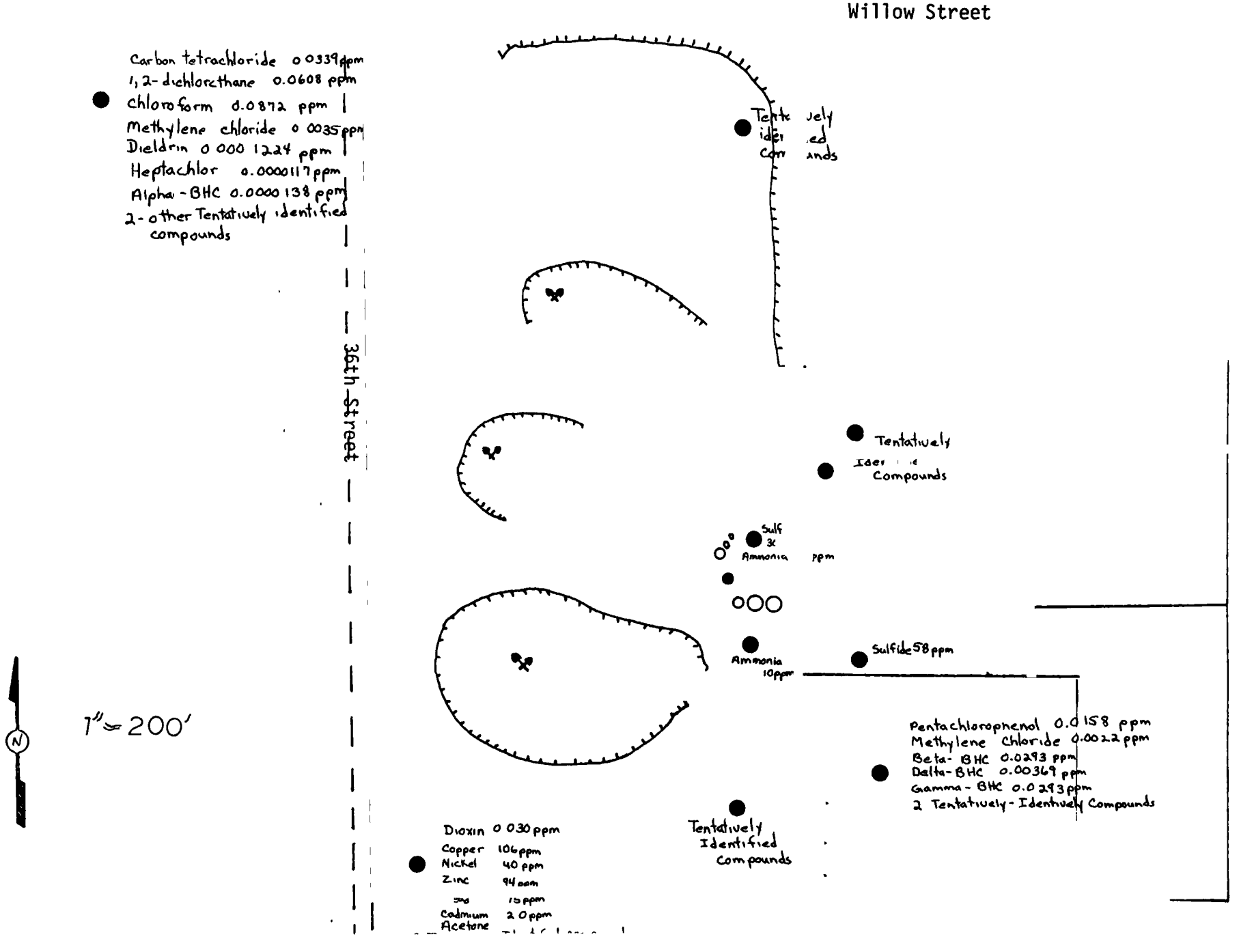


SAMPLE POINT LOCATION MAP

1. soil-frac tank storage area
2. surface and subsurface soil-frac pit area
3. surface and subsurface soil-mud pit area
4. soil/runoff
5. water-north monitoring well
6. water-south monitoring well
7. water-(b) (6) [redacted] dinking well
8. water-Dresser-Titan well
9. water-W.B.Johnston water well
10. water-(b) (6) [redacted] monitoring well #[redacted]

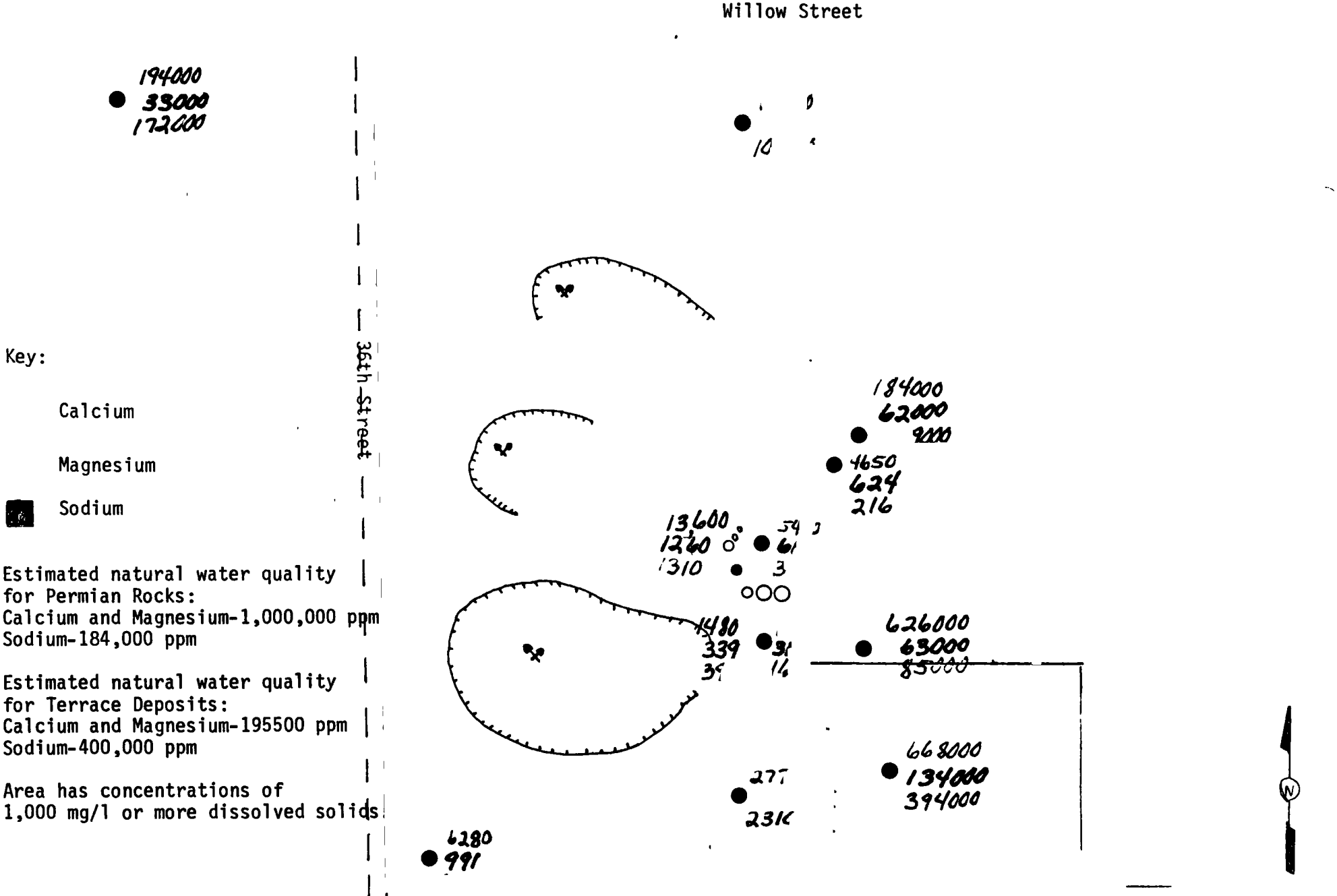
1"=200'

PORTER'S WILLOW STREET PROPERTY
Sample Results

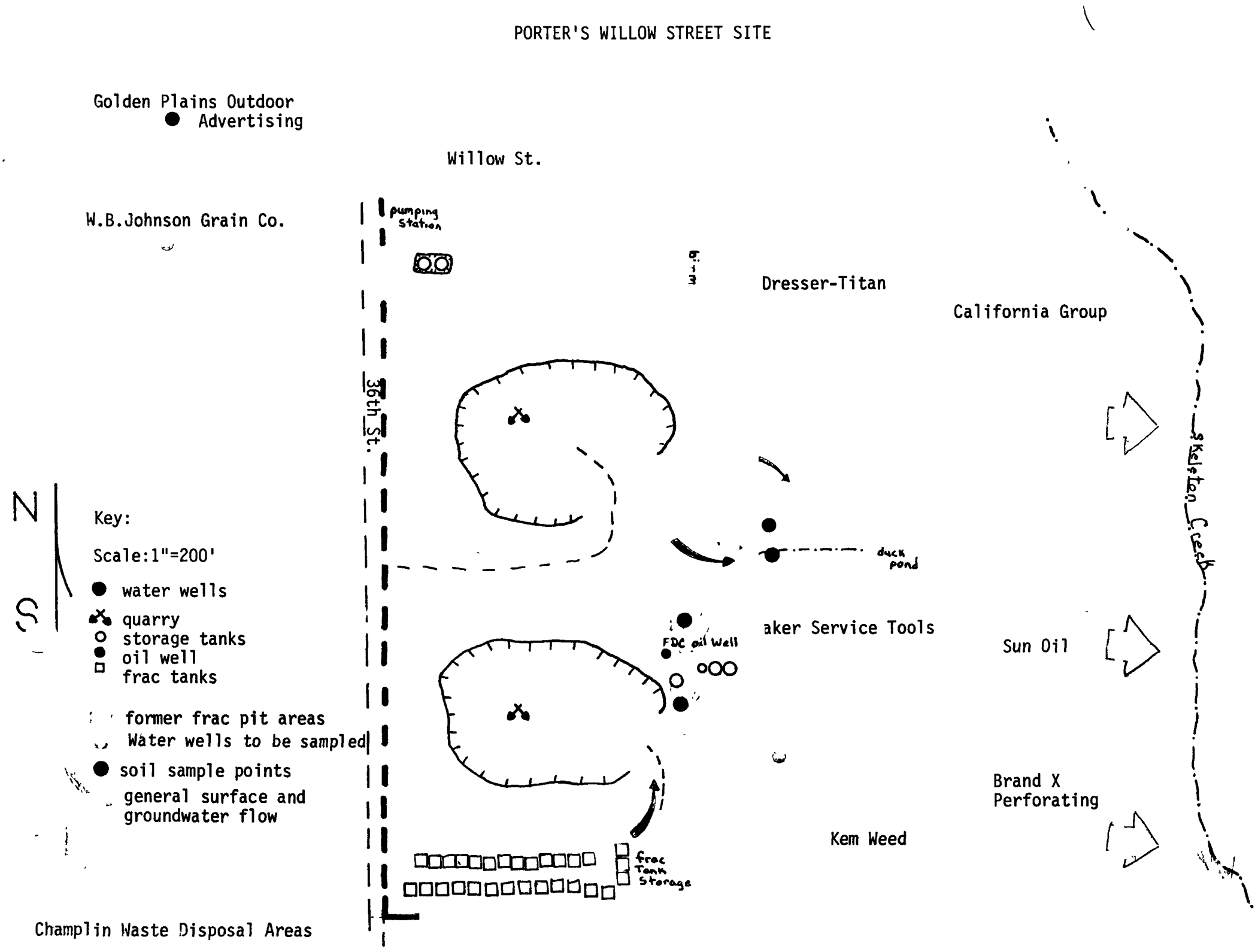


PORTER'S WILLOW STREET PROPERTY

Salt Analysis Results



PORTER'S WILLOW STREET SITE



EPA Notification of Hazardous Waste S..e

OKS-000-001-019 000435

United States Environmental Protection Agency Washington DC 20460

This initial notification information is required by Section 103(c) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 and must be mailed by June 9, 1981

Please type or print in ink If you need additional space, use separate sheets of paper Indicate the letter of the item which applies

Chesterfield Cylinder CO

A Person Required to Notify:

Enter the name and address of the person or organization required to notify

Name DENNIS L. PORTER

Street 1736 PAWHUSKA ST.

City ENID State OKLA Zip Code 73701

Rangit # OK04707

B Site Location: OKD-98-062-0751

Enter the common name (if known) and actual location of the site

Name of Site MID NITE DISPOSAL

Street 36th & WILLOW ST.

City ENID County Garfield State OKLA Zip Code 73701

C Person to Contact:

Enter the name, title (if applicable), and business telephone number of the person to contact regarding information submitted on this form

Name (Last First and Title)

Phone

D Dates of Waste Handling:

Enter the years that you estimate waste treatment, storage, or disposal began and ended at the site

From (Year) 1980 To (Year) ~~Present~~ 1981

E Waste Type: Choose the option you prefer to complete

Option I: Select general waste types and source categories If you do not know the general waste types or sources, you are encouraged to describe the site in Item I—Description of Site

General Type of Waste
Place an X in the appropriate boxes The categories listed overlap Check each applicable category

- 1 ☐ Organics
- 2 ☒ Inorganics
- 3 ☒ Solvents
- 4 ☐ Pesticides
- 5 ☒ Heavy metals
- 6 ☒ Acids
- 7 ☐ Bases
- 8 ☐ PCBs
- 9 ☐ Mixed Municipal Waste
- 10 ☐ Unknown
- 11 ☒ Other (Specify) Oil field brines methal wastes from Chesterfield

Source of Waste
Place an X in the appropriate boxes

- 1 ☐ Mining
- 2 ☐ Construction
- 3 ☐ Textiles
- 4 ☐ Fertilizer
- 5 ☐ Paper/Printing
- 6 ☐ Leather Tanning
- 7 ☒ Iron/Steel Foundry
- 8 ☐ Chemical, General
- 9 ☒ Plating/Polishing
- 10 ☐ Military/Ammunition
- 11 ☐ Electrical Conductors
- 12 ☐ Transformers
- 13 ☐ Utility Companies
- 14 ☐ Sanitary/Refuse
- 15 ☐ Photofinish
- 16 ☐ Lab/Hospital
- 17 ☒ Unknown
- 18 ☐ Other (Specify) Oilfield

Option 2 This option is available to persons familiar with the Resource Conservation and Recovery Act (RCRA) Section 3001 regulations (40 CFR Part 261)

Specific Type of Waste
EPA has assigned a four-digit number to each hazardous wast listed in the regulations under Section 3001 of RCRA Enter th appropriate four-digit number in the boxes provided A copy of the list of hazardous wastes and codes can be obtained by contacting the EPA Region serving the State in which the site located

Form Approved
OMB No 2000 0138

Notification of Hazardous Waste Site — Side Two

F Waste Quantity

Place an X in the appropriate boxes to indicate the facility types found at the site

In the "total facility waste amount" space give the estimated combined quantity (volume) of hazardous wastes at the site using cubic feet or gallons

In the "total facility area" space, give the estimated area size which the facilities occupy using square feet or acres

Facility Type

1 ☐ Piles
2 ☑ Land Treatment
3 ☐ Landfill
4 ☐ Tanks
5 ☑ Impoundment
6 ☐ Underground Injection
7 ☐ Drums, Above Ground
8 ☐ Drums, Below Ground
9 ☐ Other (Specify) _____

Total Facility Waste Amount

cubic feet _____

gallons _____

Total Facility Area

square feet _____

acres _____

G Known, Suspected or Likely Releases to the Environment

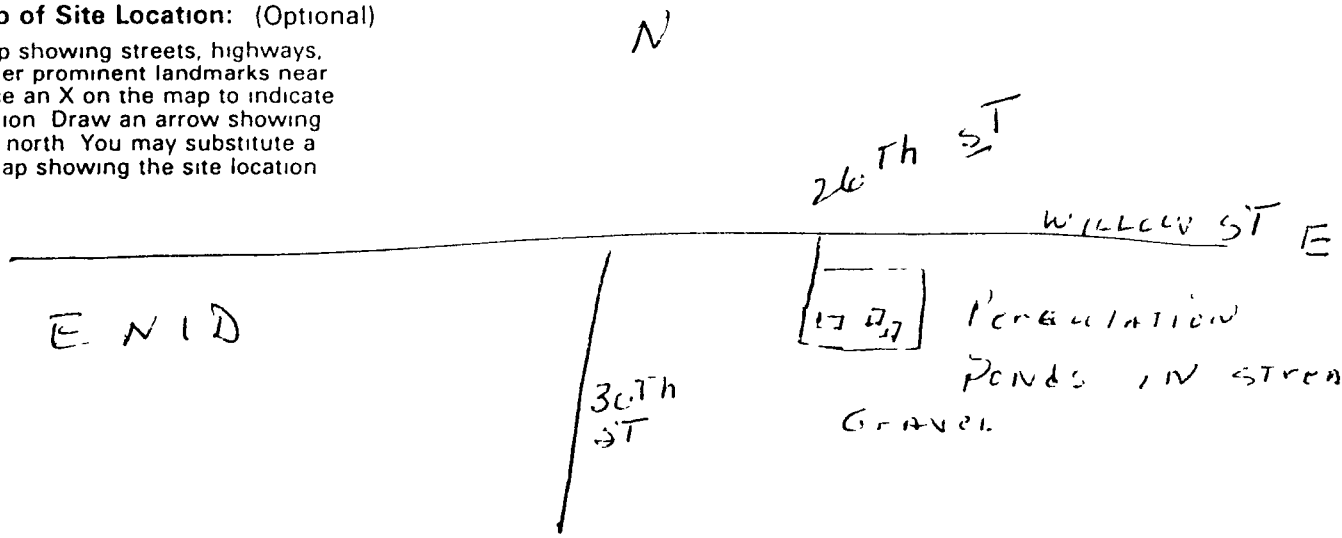
Place an X in the appropriate boxes to indicate any known, suspected, or likely releases of wastes to the environment

☒ Known ☐ Suspected ☐ Likely ☐ None

Note Items H and I are optional Completing these items will assist EPA and State and local governments in locating and assessing hazardous waste sites Although completing the items is not required, you are encouraged to do so

H Sketch Map of Site Location: (Optional)

Sketch a map showing streets, highways, routes or other prominent landmarks near the site Place an X on the map to indicate the site location Draw an arrow showing the direction north You may substitute a publishing map showing the site location



I Description of Site: (Optional)

Describe the history and present conditions of the site Give directions to the site and describe any nearby wells, springs, lakes, or housing Include such information as how waste was disposed and where the waste came from Provide any other information or comments which may help describe the site conditions

The site started as an oil well Frac pit and slush pits on property owned by Dennis Porter. Ray J Jones Truck Service has been dumping oil field brines, acid waste metal wastes from Chesterfield Cylinder co. into the pits more percolation pits are being made The pit contents are contaminating the ground water and Skeleton Creek. The Okla Corporation commission and state Health Dept. has been noticed but Corporation Commission would not do anything.

over

J Signature and Title:

The person or authorized representative (such as plant managers, superintendents, trustees or attorneys) of persons required to notify must sign the form and provide a mailing address (if different than address in item A) For other persons providing notification, the signature is optional Check the boxes which best describe the relationship to the site of the person required to notify If you are not required

Name RAY J. JONES

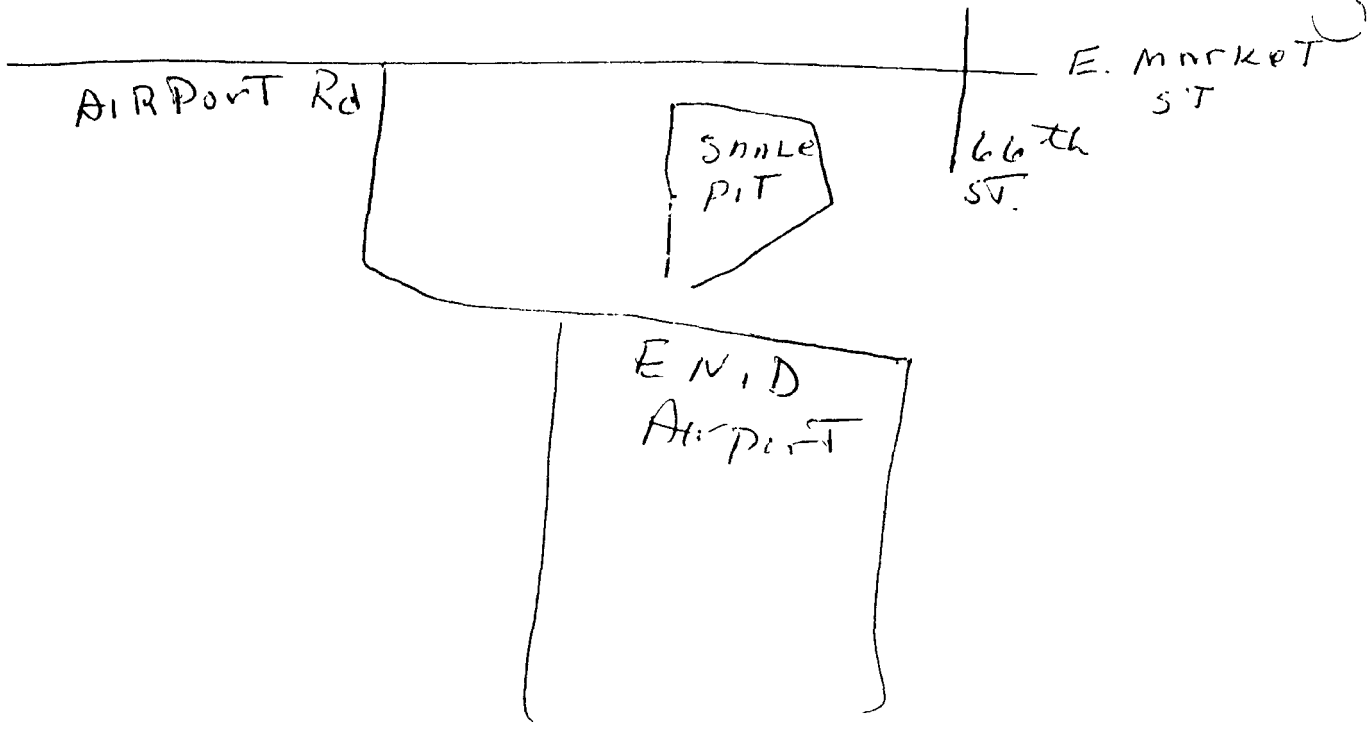
Street 2710 S VAN BUREN

City ENID State OK Zip Code 73701

Signature _____ Date _____

☐ Owner, Present
☐ Owner, Past
☑ Transporter
☐ Operator, Present
☐ Operator, Past
☐ Other

ANOTHER SITE OPERATED BY JONES AND PORTER IS BELOW.



A CEASE & DESIST ORDER WAS ISSUED, THEY MOVED TO A NEW SITE. WATER WELL NEVER CONTAMINATED AT THIS SITE.